

**WHAT IS CLAIMED IS:**

Sub  
a2

04:36:36 12/03/03

1 A method of communicating information between a first program and a  
2 second program over a network comprising:  
3 relaying said information between said first program and a first  
4 communications program over a first network connection;  
5 relaying said information between said first communications program and a  
6 second communications program over a second network connection,  
7 wherein  
8 said first communications program creates said second network  
9 connection to said second communications program through a  
10 first firewall program,  
11 said first firewall program prevents access to said first program  
12 initiated by said second program, and  
13 said second network connection is initiated by said first  
14 communications program; and  
15 relaying said information between said second communications program and  
16 said second program over a third network connection.

1 2. The method of claim 1, wherein said first program, said first  
2 communications program, said second communications program and said first firewall  
3 program are executed on a first computer system.

1 3. The method of claim 1, wherein said second communications program  
2 and said second program are executed on a first computer system.

1 4. The method of claim 1, wherein said first communications program is  
2 a protocol daemon and said second communications program is a relay program.

1 5. The method of claim 1, wherein said first firewall program also  
2 prevents access to said first program initiated by said second communications  
3 program.

*Sub  
ed*

65472692 1203303

1           6.       The method of claim 1, wherein said first communications program  
2 relays said information between said first and said second network connections.

1           7.       The method of claim 1, wherein said second communications program  
2 relays said information between said second and said third network connections.

1           8.       The method of claim 1, wherein  
2 said first program requires said first network connection to be initiated as an  
3 in-bound network connection relative to said first program,  
4 said first network connection is initiated by said first communications  
5 program, and  
6 said first network connection is in-bound relative to said first program.

1           9.       The method of claim 1, wherein  
2 said first firewall program prevents access to said first program by preventing  
3 an in-bound network connection to said first program, said in-bound  
4 network connection being in-bound relative to said first program, and  
5 said second network connection is created as an out-bound network connection  
6 from said first communications program to said second  
7 communications program.

1           10.      The method of claim 1, wherein  
2 said third network connection is created through a second firewall program,  
3 said second firewall program prevents access to said second program initiated  
4 by said second communications program, and  
5 said third network connection is initiated by said second program.

1           11.      The method of claim 10, wherein said second firewall program  
2 prevents access to said second program by inhibiting an in-bound network connection  
3 to said second program, said in-bound network connection being in-bound relative to  
4 said second program.

Sub  
a2

563025 v2  
Client Reference: 51021 Weil #1669

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
  
1  
2  
3  
  
1  
2  
  
1  
2  
  
1  
2  
3  
4  
5  
6

12. A method of communicating information between a first program and a second program over a network comprising:  
relaying said information between said first program and a first communications program over a first network connection, wherein said first program creates said first network connection to said first communications program through a first firewall program, said first firewall program prevents access to said first program initiated by said second program, and said first network connection is initiated by said first program; and relaying said information between said first communications program and said second program over a second network connection.

13. The method of claim 12, wherein said first program, said first communications program and said first firewall program are executed on a first computer system.

14. The method of claim 12, wherein said first communications program is a relay program.

15. The method of claim 12, wherein said first firewall program also prevents access to said first program initiated by said first communications program.

16. The method of claim 12, wherein said first firewall program prevents access to said first program by preventing an in-bound network connection to said first program, said in-bound network connection being in-bound relative to said first program, and said first network connection is created as an out-bound network connection from said first program to said first communications program.

Sub  
a2

17. The method of claim 12, wherein.  
said second network connection is created from said second program to said  
first communications program through a second firewall program,  
said second firewall program prevents access to said second program initiated  
by said first communications program, and  
said second network connection is initiated by said second program.

18. The method of claim 17, wherein said second firewall program  
prevents access to said second program by inhibiting an in-bound network connection  
to said second program, said in-bound network connection being in-bound relative to  
said second program.

19. A method of communicating information over a network comprising:  
relaying said information between a first program and a first communications  
program over a first network connection, wherein  
said first program requires said first network connection to be initiated  
as an in-bound network connection relative to said first  
program,  
said first network connection is initiated by said first communications  
program, and  
said first network connection is in-bound relative to said first program;  
and  
relaying said information between said first communications program and a  
second program over a second network connection, wherein  
said first communications program creates said second network  
connection to said second program through a first firewall  
program,  
said first firewall program prevents access to said first program  
initiated by said second program, and  
said second network connection is initiated by said first  
communications program.

20. The method of claim 19, wherein said first program, said first communications program and said first firewall program are executed on a first computer system.

21. The method of claim 19, wherein said first communications program is a protocol daemon.

22. The method of claim 19, wherein said first firewall program prevents access to said first program by preventing said in-bound network connection to be initiated from a side of said first firewall program that is opposite to a side of said first firewall program to which said first program is coupled, and said second network connection is created as an out-bound network connection from said first communications program to said second program.

23. A method of supporting network communications comprising:  
creating a first network connection between a first communications program and a first program;  
creating a second network connection from said first communications program to a second communications program, wherein said first communications program creates said second network connection through a first firewall program;  
creating a third network connection between a second program and said second communications program; and  
communicating information between said first program and said second program by  
communicating said information over said first network connection, said second network connection and said third network connection,

15 communicating said information between said first network connection  
 16 and said second network connection via said first  
 17 communications program, and  
 18 communicating said information between said second network  
 19 connection and said third network connection via said second  
 20 communications program.

1 24. The method of claim 23, wherein said first program, said first  
 2 communications program, said second communications program and said first firewall  
 3 program are executed on a first computer system.

1 25. The method of claim 23, wherein said second communications  
 2 program and said second program are executed on a first computer system.

1 26. The method of claim 23, wherein said first communications program is  
 2 a protocol daemon and said second communications program is a relay program.

1 27. The method of claim 23, wherein said first firewall program protects  
 2 said first program by preventing an in-bound network connection to said first  
 3 program, said in-bound network connection being in-bound relative to said first  
 4 program.

1 28. The method of claim 23, wherein said third network connection is  
 2 created from said second program to said second communications program through a  
 3 second firewall program, wherein said second firewall program prevents an in-bound  
 4 network connection to said second program, said in-bound network connection being  
 5 in-bound relative to said second program.

1 29. The method of claim 23; further comprising:  
 2 providing a first instance of a password to said first communications program;

3 passing said first instance of said password from said first communications  
4 program to said second communications program during creation of  
5 said second network connection;  
6 providing a second instance of said password to said second program;  
7 passing said second instance of said password from said second program to  
8 said second communications program during creation of said third  
9 network connection; and  
10 associating said second connection with said third connection using said first  
11 and said second instances of said password.

1 30. The method of claim 29, wherein said passing said first instance of said  
2 password further comprises:

3 sending said first instance of said password from said first communications  
4 program to said second communications program; and  
5 entering information regarding said second network connection and said  
6 password in a connection list maintained by said second  
7 communications program, said first instance of said password being  
8 entered in a password entry.

1 31. The method of claim 29, wherein said associating further comprises:  
2 matching said second instance of said password with said password entry in  
3 said connection list, said password entry containing said password;  
4 entering information regarding said third network connection in said  
5 connection list; and  
6 associating said second and third connections.

1 32. The method of claim 31, wherein said associating said second and third  
2 connections further comprises:  
3 relaying said information between said second and third connections.

03:00:00 10:00:00

Sub  
a2

5560463460

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21

33. A computer program product encoded in computer readable media for relaying information between a first program and a second program over a network, the computer program product comprising:

- a first set of instructions, executable by a processor and configured to cause said processor to relay said information between said first program and a first communications program over a first network connection;
- a second set of instructions, executable by said processor and configured to cause said processor to relay said information between said first communications program and a second communications program over a second network connection, wherein said first communications program creates said second network connection to said second communications program through a first firewall program, said first firewall program prevents access to said first program initiated by said second program, and said second network connection is initiated by said first communications program; and
- a third set of instructions, executable by said processor and configured to cause said processor to relay said information between said second communications program and said second program over a third network connection.

1  
2  
3

34. The computer program product of claim 33, wherein said first set of instructions and said second set of instructions are executed on a first computer system.

1  
2  
3

35. The computer program product of claim 33, wherein said first firewall program also prevents access to said first program initiated by said second communications program.



Sub  
Q2

563025 v2  
Client Reference: 51021 Weil #1669

1 36. The computer program product of claim 33, wherein said first program  
2 is executed on a first processor, said first communications program is executed on a  
3 second processor, said second communications program is executed on a third  
4 processor and said second program is executed on a fourth processor.

1 37. The computer program product of claim 33, wherein said first program  
2 is executed on a first processor, first communications program is executed on a  
3 second processor and said second program is executed on a third processor.

1 38. The computer program product of claim 33, wherein  
2 said first program requires said first network connection to be initiated as an  
3 in-bound network connection relative to said first program,  
4 said first network connection is initiated by said first communications  
5 program, and  
6 said first network connection is in-bound relative to said first program.

1 39. The computer program product of claim 33, wherein  
2 said first firewall program prevents access to said first program by preventing  
3 an in-bound network connection to said first program, said in-bound  
4 network connection being in-bound relative to said first program, and  
5 said second network connection is created as an out-bound network connection  
6 from said first communications program to said second  
7 communications program.

1 40. The computer program product of claim 33, wherein  
2 said third network connection is created through a second firewall program,  
3 said second firewall program prevents access to said second program initiated  
4 by said second communications program, and  
5 said third network connection is initiated by said second program.

1. **Introduction**  
 2. **Background**  
 3. **Methodology**  
 4. **Results**  
 5. **Discussion**  
 6. **Conclusion**  
 7. **References**  
 8. **Appendix**  
 9. **Index**  
 10. **Table of Contents**  
 11. **Abstract**  
 12. **Summary**  
 13. **Key Words**  
 14. **Keywords**  
 15. **Subject Headings**  
 16. **Classification**  
 17. **Indexing**  
 18. **Keywords**  
 19. **Subject Headings**  
 20. **Classification**  
 21. **Indexing**  
 22. **Keywords**  
 23. **Subject Headings**  
 24. **Classification**  
 25. **Indexing**  
 26. **Keywords**  
 27. **Subject Headings**  
 28. **Classification**  
 29. **Indexing**  
 30. **Keywords**  
 31. **Subject Headings**  
 32. **Classification**  
 33. **Indexing**  
 34. **Keywords**  
 35. **Subject Headings**  
 36. **Classification**  
 37. **Indexing**  
 38. **Keywords**  
 39. **Subject Headings**  
 40. **Classification**  
 41. **Indexing**  
 42. **Keywords**  
 43. **Subject Headings**  
 44. **Classification**  
 45. **Indexing**  
 46. **Keywords**  
 47. **Subject Headings**  
 48. **Classification**  
 49. **Indexing**  
 50. **Keywords**  
 51. **Subject Headings**  
 52. **Classification**  
 53. **Indexing**  
 54. **Keywords**  
 55. **Subject Headings**  
 56. **Classification**  
 57. **Indexing**  
 58. **Keywords**  
 59. **Subject Headings**  
 60. **Classification**  
 61. **Indexing**  
 62. **Keywords**  
 63. **Subject Headings**  
 64. **Classification**  
 65. **Indexing**  
 66. **Keywords**  
 67. **Subject Headings**  
 68. **Classification**  
 69. **Indexing**  
 70. **Keywords**  
 71. **Subject Headings**  
 72. **Classification**  
 73. **Indexing**  
 74. **Keywords**  
 75. **Subject Headings**  
 76. **Classification**  
 77. **Indexing**  
 78. **Keywords**  
 79. **Subject Headings**  
 80. **Classification**  
 81. **Indexing**  
 82. **Keywords**  
 83. **Subject Headings**  
 84. **Classification**  
 85. **Indexing**  
 86. **Keywords**  
 87. **Subject Headings**  
 88. **Classification**  
 89. **Indexing**  
 90. **Keywords**  
 91. **Subject Headings**  
 92. **Classification**  
 93. **Indexing**  
 94. **Keywords**  
 95. **Subject Headings**  
 96. **Classification**  
 97. **Indexing**  
 98. **Keywords**  
 99. **Subject Headings**  
 100. **Classification**  
 101. **Indexing**  
 102. **Keywords**  
 103. **Subject Headings**  
 104. **Classification**  
 105. **Indexing**  
 106. **Keywords**  
 107. **Subject Headings**  
 108. **Classification**  
 109. **Indexing**  
 110. **Keywords**  
 111. **Subject Headings**  
 112. **Classification**  
 113. **Indexing**  
 114. **Keywords**  
 115. **Subject Headings**  
 116. **Classification**  
 117. **Indexing**  
 118. **Keywords**  
 119. **Subject Headings**  
 120. **Classification**  
 121. **Indexing**  
 122. **Keywords**  
 123. **Subject Headings**  
 124. **Classification**  
 125. **Indexing**  
 126. **Keywords**  
 127. **Subject Headings**  
 128. **Classification**  
 129. **Indexing**  
 130. **Keywords**  
 131. **Subject Headings**  
 132. **Classification**  
 133. **Indexing**  
 134. **Keywords**  
 135. **Subject Headings**  
 136. **Classification**  
 137. **Indexing**  
 138. **Keywords**  
 139. **Subject Headings**  
 140. **Classification**  
 141. **Indexing**  
 142. **Keywords**  
 143. **Subject Headings**  
 144. **Classification**  
 145. **Indexing**  
 146. **Keywords**  
 147. **Subject Headings**  
 148. **Classification**  
 149. **Indexing**  
 150. **Keywords**  
 151. **Subject Headings**  
 152. **Classification**  
 153. **Indexing**  
 154. **Keywords**  
 155. **Subject Headings**  
 156. **Classification**  
 157. **Indexing**  
 158. **Keywords**  
 159. **Subject Headings**  
 160. **Classification**  
 161. **Indexing**  
 162. **Keywords**  
 163. **Subject Headings**  
 164. **Classification**  
 165. **Indexing**  
 166. **Keywords**  
 167. **Subject Headings**  
 168. **Classification**  
 169. **Indexing**  
 170. **Keywords**  
 171. **Subject Headings**  
 172. **Classification**  
 173. **Indexing**  
 174. **Keywords**  
 175. **Subject Headings**  
 176. **Classification**  
 177. **Indexing**  
 178. **Keywords**  
 179. **Subject Headings**  
 180. **Classification**  
 181. **Indexing**  
 182. **Keywords**  
 183. **Subject Headings**  
 184. **Classification**  
 185. **Indexing**  
 186. **Keywords**  
 187. **Subject Headings**  
 188. **Classification**  
 189. **Indexing**  
 190. **Keywords**  
 191. **Subject Headings**  
 192. **Classification**  
 193. **Indexing**  
 194. **Keywords**  
 195. **Subject Headings**  
 196. **Classification**  
 197. **Indexing**  
 198. **Keywords**  
 199. **Subject Headings**  
 200. **Classification**  
 201. **Indexing**  
 202. **Keywords**  
 203. **Subject Headings**  
 204. **Classification**  
 205. **Indexing**  
 206. **Keywords**  
 207. **Subject Headings**  
 208. **Classification**  
 209. **Indexing**  
 210. **Keywords**  
 211. **Subject Headings**  
 212. **Classification**  
 213. **Indexing**  
 214. **Keywords**  
 215. **Subject Headings**  
 216. **Classification**  
 217. **Indexing**  
 218. **Keywords**  
 219. **Subject Headings**  
 220. **Classification**  
 221. **Indexing**  
 222. **Keywords**  
 223. **Subject Headings**  
 224. **Classification**  
 225. **Indexing**  
 226. **Keywords**  
 227. **Subject Headings**  
 228. **Classification**  
 229. **Indexing**  
 230. **Keywords**  
 231. **Subject Headings**  
 232. **Classification**  
 233. **Indexing**  
 234. **Keywords**  
 235. **Subject Headings**  
 236. **Classification**  
 237. **Indexing**  
 238. **Keywords**  
 239. **Subject Headings**  
 240. **Classification**  
 241. **Indexing**  
 242. **Keywords**  
 243. **Subject Headings**  
 244. **Classification**  
 245. **Indexing**  
 246. **Keywords**  
 247. **Subject Headings**  
 248. **Classification**  
 249. **Indexing**  
 250. **Keywords**  
 251. **Subject Headings**

42. A communicating in

et of instructions, executable by a processor and cause said processor to relay said information between said first communications program over a first network connection, in the absence of being configured to cause said processor to relay said information between said first communications program and said second program over said first network connection from said first program to said second program through a first firewall program, wherein said first firewall program prevents access to said first network connection initiated by a second program, and wherein said first network connection is initiated by said first program and said second set of instructions, executable on said processor to cause said processor to relay said information between said first communications program and said second program over said first network connection.

The computer program product of claim 42, wherein said second set of instructions are executed on a second processor.

The computer program product of claim 42, wherein said first processor, said first communications program and said second program is executed on a third processor.

42,

44. The computer program product of claim 42, wherein said first program is executed on a first processor, said first communications program is executed on a second processor and said second program is executed on a third processor.

Sub  
a2

45. The computer program product of claim 42, wherein said first firewall program also prevents access to said first program initiated by said first communications program.

46. The computer program product of claim 42, wherein said first communications program is a relay program.

47. The computer program product of claim 42, further comprising:  
a third set of instructions, executable on said processor and configured to cause said processor to prevent access to said first program through said first firewall program by virtue of being configured to prevent an in-bound network connection to said first program, said in-bound network connection being in-bound relative to said first program, and  
a fourth set of instructions, executable on said processor and configured to cause said processor to create said first network connection as an out-bound network connection from said first program to said first communications program.

48. The computer program product of claim 42, further comprising:  
a third set of instructions, executable on said processor and configured to cause said processor to create said second network connection from said second program to said first communications program through a second firewall program;  
a fourth set of instructions, executable on said processor and configured to cause said processor to prevent access to said second program initiated by said first communications program through said second firewall program; and  
a fifth set of instructions, executable on said processor and configured to cause said processor to initiate said second network connection from said second program.

563025 v2  
Client Reference: 51021 Weil #1669

49. The computer program product of claim 42, further comprising:  
a sixth set of instructions, executable on said processor and configured to  
cause said processor to prevent access to said second program through  
said second firewall program by inhibiting an in-bound network  
connection to said second program, said in-bound network connection  
being in-bound relative to said second program;

50. A computer program product encoded in computer readable media for  
communicating information between a first program and a second program over a  
network, the computer program product comprising:  
a first set of instructions, executable by a processor and configured to cause  
said processor to relay said information between a first program and a  
first communications program over a first network connection, wherein  
said first program requires said first network connection to be initiated  
as an in-bound network connection relative to said first  
program,  
said first network connection is initiated by said first communications  
program, and  
said first network connection is in-bound relative to said first program;  
and  
a second set of instructions, executable on said processor and configured to  
cause said processor to relay said information between said first  
communications program and a second program over a second network  
connection, wherein  
said first communications program creates said second network  
connection to said second program through a first firewall  
program,  
said first firewall program prevents access to said first program  
initiated by said second program, and  
said second network connection is initiated by said first  
communications program.

51. The computer program product of claim 50, wherein said first set of instructions and said second set of instructions are executed on a first computer system.

52. The computer program product of claim 50, wherein said first communications program is a protocol daemon.

53. The computer program product of claim 52, wherein said plurality of entries comprises a routing table, further comprising:  
a third set of instructions, executable on said processor and configured to cause said processor to prevent access to said first program by virtue of said first firewall program preventing said in-bound network connection to be initiated from a side of said first firewall program that is opposite to a side of said first firewall program to which said first program is coupled; and  
a fourth set of instructions, executable on said processor and configured to cause said processor to create said second network connection as an out-bound network connection from said first communications program to said second program.

54. A network comprising:  
a first program executed on a first computer;  
a first firewall program executed on a second computer coupled to said first computer;  
a second program executed on a third computer coupled to said second computer; and  
a third program executed on a fourth computer coupled to said third computer, wherein  
said first firewall program is configured to prevent access to said first program initiated by said third program,

11 *Sub*  
12 *Q2*  
13 said first program is configured to initiate a first network connection to  
14 said second program through said first firewall program, and  
15 said second program and said third program are configured to support a  
second network connection between said second program and  
said third program.

1 55. The network of claim 54, wherein said first program, said first  
2 communications program and said second program are executed on said first  
3 computer.

1 56. The network of claim 54, wherein said second program and said third  
2 program are executed on said fourth computer.

1 57. The network of claim 54, further comprising:  
2 a second firewall program executed on a fifth computer coupled between said  
3 third computer and said fourth computer.

1 58. The network of claim 57, wherein said second firewall program is  
2 configured to prevent access to said third program initiated by said first program.

1 59. The network of claim 58, wherein said second firewall program  
2 prevents access to said third program by inhibiting an in-bound network connection to  
3 said third program, said in-bound network connection being in-bound relative to said  
4 third program.

1 60. The network of claim 57, wherein said first firewall program is also  
2 configured to prevent access to said first program initiated by said second program  
3 and said second firewall program is also configured to prevent access to said third  
4 program initiated by said second program.

Sub  
a2

61. The network of claim 57, wherein  
said first firewall program is configured to prevent access to said first program  
by virtue of being configured to prevent an in-bound network  
connection to said first program, said in-bound network connection  
being in-bound relative to said first program, and  
said first program is configured to create said first network connection as an  
out-bound network connection from said first program to said second  
program.

62. The network of claim 57, wherein.  
said second network connection is created from said second program to said  
first communications program through a second firewall program,  
said second firewall program prevents access to said second program initiated  
by said first communications program, and  
said second network connection is initiated by said second program.

63. The network of claim 54, further comprising:  
a fourth program executed on a fifth computer coupled to said first computer,  
wherein  
said first program is configured to initiate a third network connection  
to said fourth program, said third network connection being in-  
bound relative to said fourth program, and  
said fourth program is configured to require said third network  
connection to be initiated as an in-bound network connection  
relative to said fourth program.

64. The network of claim 63, wherein said first firewall program also  
prevents access to said first program initiated by said second program.

65. The network of claim 63, wherein said first firewall program also  
prevents access to said fourth program initiated by said second program.

563025 v2 51021 Weil #1669

Sub  
Q2

66. The network of claim 63, wherein  
said first firewall program prevents access to said first and said fourth  
programs by preventing in-bound network connections to said first and  
said fourth programs, and  
said first network connection is created as an out-bound network connection  
from said first program to said second program.

67. The network of claim 63, wherein  
said third network connection is created through a second firewall program,  
said second firewall program prevents access to said third program initiated by  
said first and said second programs, and  
said third network connection is initiated by said third program.

68. The network of claim 63, wherein said second firewall program  
prevents access to said third program by inhibiting an in-bound network connection to  
said third program, said in-bound network connection being in-bound relative to said  
third program.

69. A network comprising:  
a first program executed on a first computer;  
a second program executed on a second computer coupled to said first  
computer;  
a first firewall program executed on a third computer coupled to said first  
computer;  
a third program executed on a fourth computer coupled to said second  
computer, wherein  
said first firewall program is configured to prevent access to said first  
program initiated by said third program,  
said first program is configured to initiate a first network connection to  
said second program through said first firewall program,

563025 v2 Weil #1669



13 *Gil*  
 14 *at*  
 15 said second program is configured to initiate a second network  
 16 connection to said first program, said second network  
 17 connection being in-bound relative to said first program, and  
 18 said first program is configured to require said second network  
 connection to be initiated as an in-bound network connection  
 relative to said first program.

1 70. The network of claim 69, wherein said first program, said second  
 2 program and said first firewall program are executed on said first computer.

1 71. The network of claim 69, wherein  
 2 said first firewall program prevents access to said first program by preventing  
 3 said in-bound network connection to be initiated from a side of said  
 4 first firewall program that is opposite to a side of said first firewall  
 5 program to which said first program is coupled, and  
 6 said second network connection is created as an out-bound network connection  
 7 from said second program to said third program.

1 72. The network of claim 71, wherein said first firewall program is also  
 2 configured to prevent access to said second program initiated by said third program.

1 73. A method of communicating information between a first program and a  
 2 second program over a network comprising:  
 3 creating a first out-bound network connection from a first communications  
 4 program to said first program, wherein said first out-bound network  
 5 connection is out-bound relative to said first communications program;  
 6 creating a second out-bound network connection from said first  
 7 communications program to said second program through a first  
 8 firewall program, wherein  
 9 said second out-bound network connection is out-bound relative to said  
 10 first communications program

03/15/2012 1:00:00 PM

*Sub*  
*CD*

11 said first firewall program prevents in-bound access to said first  
12 program,  
13 said in-bound access is a network connection that is in-bound relative  
14 to said first program, and  
15 said first program is configured to accept only an in-bound connection  
16 to said first program; and  
17 relaying said information between said first out-bound network connection and  
18 said second out-bound network connection, said relaying performed by  
19 said first communications program.

1 74. The method of claim 73, wherein said first communications program is  
2 a protocol daemon.

1 75. The method of claim 73, wherein said second out-bound network  
2 connection is created through a second firewall program, wherein said second firewall  
3 program prevents in-bound access to said second program.

1 76. The method of claim 73, wherein said first program, said first  
2 communications program and said first firewall program are executed on a first  
3 computer system.

1 77. A computer system comprising:  
2 a processor;  
3 computer readable medium coupled to said processor; and  
4 computer code, encoded in said computer readable medium, configured to  
5 cause said processor to:  
6 create a first out-bound network connection from a first  
7 communications program to said first program, wherein said  
8 first out-bound network connection is out-bound relative to said  
9 first communications program;

10 *Sub*  
 11 *Q2*  
 12 create a second out-bound network connection from said first  
 13 communications program to said second program through a  
 14 first firewall program, wherein  
 15 said second out-bound network connection is out-bound  
 16 relative to said first communications program  
 17 said first firewall program prevents in-bound access to said first  
 18 program,  
 19 said in-bound access is a network connection that is in-bound  
 20 relative to said first program, and  
 21 said first program is configured to accept only an in-bound  
 22 connection to said first program; and  
 23 relay said information between said first out-bound network connection  
 and said second out-bound network connection, said relaying  
 performed by said first communications program.

1 78. The computer system of claim 77, wherein said first communications  
 2 program is a protocol daemon.

1 79. The computer system of claim 77, wherein said computer code  
 2 configured to cause said processor to create said second out-bound network  
 3 connection is further configured to cause said processor to:  
 4 create said second out-bound network connection through a second firewall  
 5 program, wherein said second firewall program prevents in-bound  
 6 access to said second program.

1 80. The computer system of claim 77, wherein said computer code  
 2 configured to cause said processor to create said first out-bound network connection,  
 3 create said second out-bound network connection, and relay said information is  
 4 executed on a single processor.

Sub  
Q2

1 81. A computer program product encoded in computer readable media,  
 2 said computer program product comprising:  
 3 a first set of instructions, executable on a computer system, configured to  
 4 create a first out-bound network connection from a first  
 5 communications program to said first program, wherein said first out-  
 6 bound network connection is out-bound relative to said first  
 7 communications program;  
 8 a second set of instructions, executable on said computer system, configured to  
 9 create a second out-bound network connection from said first  
 10 communications program to said second program through a first  
 11 firewall program, wherein  
 12 said second out-bound network connection is out-bound relative to said  
 13 first communications program  
 14 said first firewall program prevents in-bound access to said first  
 15 program,  
 16 said in-bound access is a network connection that is in-bound relative  
 17 to said first program, and  
 18 said first program is configured to accept only an in-bound connection  
 19 to said first program; and  
 20 a third set of instructions, executable on said computer system, configured to  
 21 relay said information between said first out-bound network connection  
 22 and said second out-bound network connection, said relaying  
 23 performed by said first communications program.

1 82. The computer program product of claim 81, wherein said first  
 2 communications program is a protocol daemon.

1 83. The computer program product of claim 81, wherein said second set of  
 2 instructions comprises:  
 3 a fourth set of instructions, executable on said computer system, configured to  
 4 create said second out-bound network connection through a second

09450592.166999

5 Sub  
6 a2

firewall program, wherein said second firewall program prevents in-bound access to said second program.

1 84. The computer program product of claim 81, wherein said first, said  
2 second and said third sets of instructions are executed on a single computer system.

1 85. A method of communicating information between a first program and a  
2 second program over a network comprising:

3 creating a first out-bound network connection from said first program to a first  
4 communications program through a first firewall program, wherein  
5 said first out-bound network connection is out-bound relative to said  
6 first program, and

7 said first firewall program prevents in-bound access to said first  
8 program; and

9 creating a second out-bound network connection from said second program to  
10 said first communications program through a second firewall program,  
11 wherein

12 said second out-bound network connection is out-bound relative to said  
13 second program, and

14 said second firewall program prevents in-bound access to said second  
15 program; and

16 relaying said information between said first out-bound network connection and  
17 said second out-bound network connection, said relaying performed by  
18 said first communications program.

1 86. The method of claim 85, wherein said first communications program is  
2 a relay program.

1 87. The method of claim 85, further comprising:  
2 creating a third out-bound network connection from said first program to a  
3 third program.

Sub  
12

88. The method of claim 87, wherein  
said third out-bound network connection is out-bound relative to said first  
program and in-bound relative to said third program, and  
said third program is configured to accept only an in-bound connection to said  
third program.

89. The method of claim 85, wherein said first program, said first  
communications program and said first firewall program are executed on a first  
computer system.

90. The method of claim 85, wherein said second program, said first  
communications program and said second firewall program are executed on a first  
computer system.

91. A computer system comprising:  
a processor;  
computer readable medium coupled to said processor; and  
computer code, encoded in said computer readable medium, configured to  
cause said processor to:  
create a first out-bound network connection from said first program to  
a first communications program through a first firewall  
program, wherein  
said first out-bound network connection is out-bound relative to  
said first program, and  
said first firewall program prevents in-bound access to said first  
program; and  
create a second out-bound network connection from said second  
program to said first communications program through a  
second firewall program, wherein  
said second out-bound network connection is out-bound  
relative to said second program, and

04/03/2017 10:03:00

*Suit  
C2*

18 said second firewall program prevents in-bound access to said  
19 second program; and  
20 relay said information between said first out-bound network connection  
21 and said second out-bound network connection, said relaying  
22 performed by said first communications program.

1 92. The computer system of claim 91, wherein said first communications  
2 program is a relay program.

1 93. The computer system of claim 91, wherein said computer code is  
2 further configured to cause said processor to:  
3 create a third out-bound network connection from said first program to a third  
4 program.

1 94. The computer system of claim 93, wherein  
2 said third out-bound network connection is out-bound relative to said first  
3 program and in-bound relative to said third program, and  
4 said third program is configured to accept only an in-bound connection to said  
5 third program.

1 95. The computer system of claim 91, wherein said first program, said first  
2 communications program and said first firewall program are executed on a single  
3 processor.

1 96. The computer system of claim 91, wherein said second program, said  
2 first communications program and said second firewall program are executed on a  
3 first computer system.

1 97. A computer program product encoded in computer readable media,  
2 said computer program product comprising:  
3 a first set of instructions, executable on a computer system, configured to  
4 create a first out-bound network connection from said first program to

Sal  
ad

communications program through a  
out-bound network connection is  
first program, and  
firewall program prevents in-bou  
program; and  
instructions, executable on said co  
second out-bound network connec  
to said first communications pro  
program, wherein  
and out-bound network connection  
second program, and  
and firewall program prevents in-  
program; and  
structions, executable on said com  
d information between said first c  
second out-bound network connec  
ed by said first communications p  
puter program/product of claim 9  
m is a relay program.  
puter program/product of claim 9  
r comprises:  
structions, executable on said co  
third out-bound network connecti  
rogram.  
puter program/product of claim 9  
ound network connection is out-bo  
and in-bound relative to said thir

- 1
- 2

1  
2

3  
4  
5

- 1
- 2
- 3



4 said third program is configured to accept only an in-bound connection to said  
5 third program.

1 101. The computer program product of claim 97, wherein said first program,  
2 said first communications program and said first firewall program are executed on a  
3 single processor.

1 102. The computer program product of claim 97, wherein said second  
2 program, said first communications program and said second firewall program are  
3 executed on a first computer system.

add  
a2

00456666 1005555